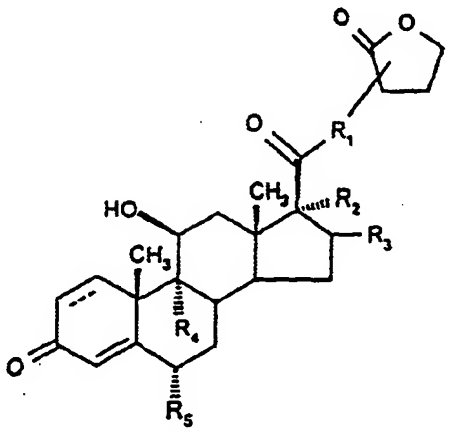
CLAIMS

1. A therapeutically active compound or a salt or solvate thereof, hydrolysable in human or animal blood by a lactonase enzyme to a compound with reduced therapeutic activity with the proviso that the therapeutically active compound is not selected from the group consisting of:

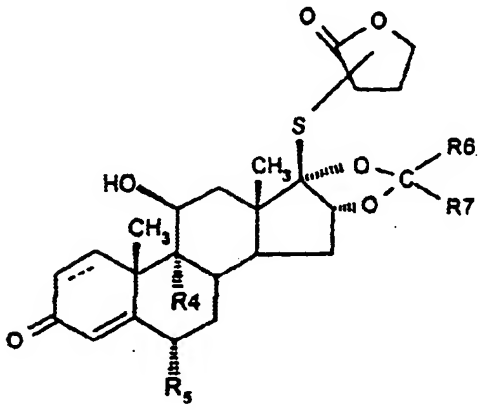
a compound of formula (I)



(I)

;

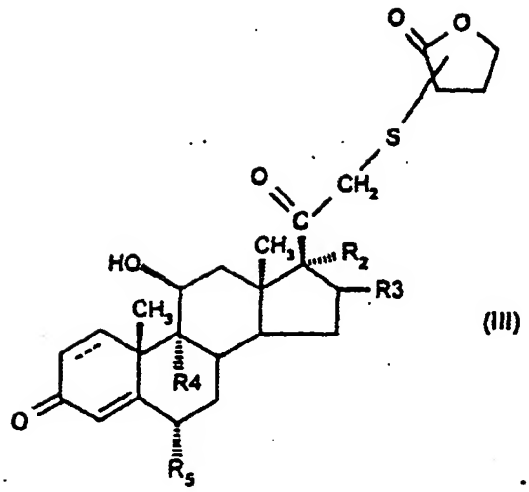
a compound of formula (II)



(II)

;

a c mpound of formula (III)



(III)

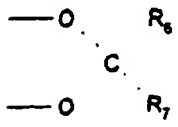
and solvates thereof, in which

R_1 represents O, S or NH;

R_2 individually represents $OC(=O)C_{1-6}$ alkyl;

R_3 individually represents hydrogen, methyl (which may be in either the α or β configuration) or methylene;

or R_2 and R_3 together represent



R_4 and R_5 are the same or different and each represents hydrogen or halogen;

R_6 and R_7 are the same or different and each represents hydrogen or C_{1-6} alkyl; and

⚌ represents a single or a double bond.

2. A compound according to claim 1 comprising a ring structure including a hydrolysable ester linkage.

3. A compound according to claim 2, wherein said ring structure is a 5-membered ring structure.

4. A compound according to any preceding claim, wherein said lactonase enzyme is a γ-lactonase or paraoxonase enzyme.

5. A compound according to claim 4 wherein said paraoxonase enzyme is human serum paraoxonase or a recombinant form thereof.

6. A compound according to any of claims 1 to 5, wherein the compound contains a lactone group, preferably a γ-lactone group.

7. compound according to claim 6, wherein the compound is a glucocorticosteroid compound.

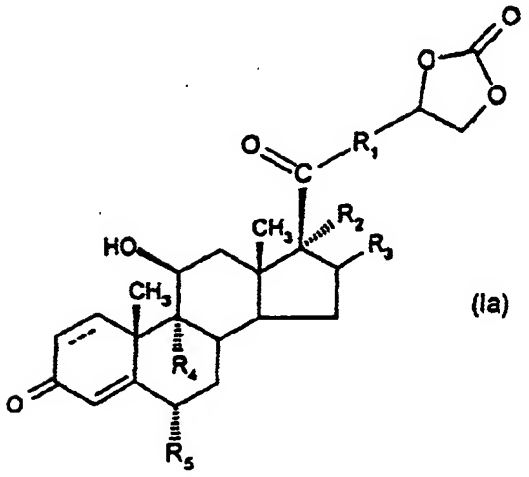
8. A glucocorticosteroid compound according to claim 7, wherein the glucocorticosteroid compound is selected from the group consisting of:
6α,9α-Difluoro-11β-hydroxy-16α-methyl-17-spiro[androsta-1,4-diene-17,5'-[1,3]oxathiolane]-2',3,4'-trione;
6α,9α-Difluoro-11β-hydroxy-16α-methyl-3-oxo-17α-propionyloxy-androsta-1,4-diene-17β-carbothioic acid *S*-(2-oxo-tetrahydro-furan-3-ylmethyl) ester;
6α,9α-Difluoro-11β-hydroxy-16α-methyl-3-oxo-17α-(2-oxo-tetrahydrofuran-4-ylsulfanyl-acetoxy)-androsta-1,4-diene-17β-carbothioic acid methyl ester;
6α,9α-Difluoro-11β,21-dihydroxy-16α,17α-[2-(2-oxo-tetrahydrofuran-3-yl)sulfanyl]ethylidenedioxy-pregn-4-ene-3,20-dione;
9α-Fluoro-11β,17α,21-trihydroxy-3,20-dioxo-pregna-1,4-diene-16α-acetic acid γ-lactone; and salts and solvates thereof.

9. A compound according to any of claims 1 to 5, wherein the compound is a β_2-adrenoreceptor agonist compound.

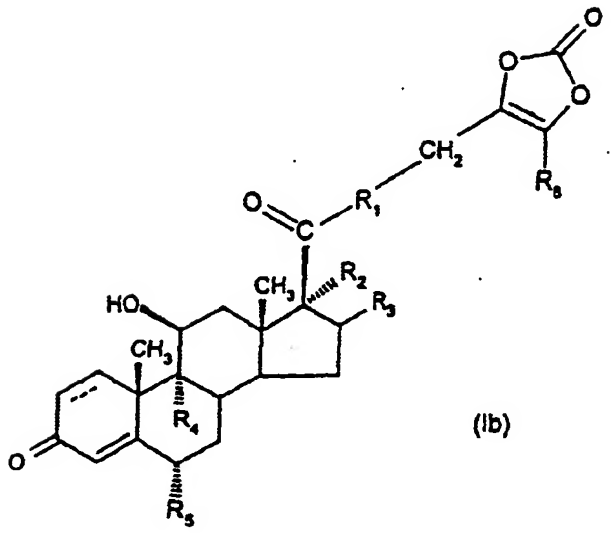
10. A compound according to claim 9 selected from the group consisting of 3-[3-[2-(4-Amino-3,5-dichlorophenyl)-2-hydroxyethylamino]propylsulfanyl]-dihydro-furan-2-one trifluoroacetate; and salts and solvates thereof.

11. A compound according to any of claims 1 to 5, wherein the compound includes a cyclic carbonate group.

12. A compound according to claim 11 having the formula (Ia) or (Ib)



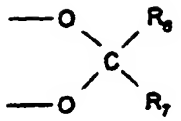
(Ia)



(Ib)

and solvates thereof, in which

R_1 represents O or S;
R_2 individually represents $OC(=O)C_{1-6}$ alkyl;
R_3 individually represents hydrogen, methyl (which may be in either the α or β configuration) or methylene;
or R_2 and R_3 together represent



wherein R_6 and R_7 are the same or different and each represents hydrogen or C_{1-6} alkyl;
R_4 and R_5 are the same or different and each represents hydrogen or halogen;
R_8 represents hydrogen, C_{1-6} alkyl or aryl; and
⋯⋯ represents a single or a double bond.

13. Pharmaceutical composition comprising a compound according to any of claims 1 to 12 and a pharmaceutically acceptable diluent or carrier.

14. Compound according to any of claims 1 to 12 for use in human or veterinary therapy.

15. Compound according to claim 14, wherein said use is the treatment of patients with inflammatory or allergic conditions.

16. Compound according to claim 15, wherein said use is the treatment of respiratory disorders or disorders of the gastrointestinal tract.

17. The use of a compound according to any of claims 1 to 12 for the manufacture of a medicament for use in the treatment of patients with respiratory disorders or disorders of the gastrointestinal tract.

18. A method of providing localised therapeutic effect at a target site within a human or animal body comprising administering a compound to said target site, wherein said compound is hydrolysable in human or animal blood by a lactonase enzyme to a compound with reduced therapeutic activity.

19. Method according to claim 18, wherein said target site is the human or animal lung or gastrointestinal tract.

20. A method of identifying a compound capable of providing a therapeutic effect at a target site within a human or animal body with reduced systemic potency to said body comprising

(a) comparing the susceptibility to hydrolysis of said compound in the presence of lactonase enzyme to the corresponding susceptibility in the absence of said lactonase enzyme; and

(b) selecting a compound on the basis of enhanced susceptibility to hydrolysis in the presence of the lactonase enzyme.

21. Method according to claim 20, wherein the susceptibility to hydrolysis is compared by means of the 'enzymatic hydrolysis test method' defined herein.

22. Method according to claim 21, wherein the half-life of said compound in the presence of lactonase enzyme is less than 1 hour.

23. Method according to claim 22, wherein said half-life is less than 30 minutes, preferably less than 10 minutes.

24. A method of treatment of respiratory and gastrointestinal tract disord rs comprising administration to a mammal of a therapeutic am unt of a compound identified by the method of claims 20-23.

25. A method of treatment as claimed in claim 24 wherein the respiratory disorder is asthma, rhinitis, nasal polyps or chronic obstructive pulmonary disease.

26. A compound identified by the method of claims 20-23, for use in medical therapy.

27. A compound as claimed in claim 26, wherein said use is the treatment of patients with inflammatory or allergic conditions.

28. The use of a compound identified by the method of claims 20-23 for the manufacture of a medicament for use in the treatment of patents with respiratory disorders or disorders of the gastrointestinal tract.